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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BRANCOLINI, JOHN R	

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 10/08/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/783,147	ERICKSON, RODGER D.	
	Examiner	Art Unit	
	John R Brancolini	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-87* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-87* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 February 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5, 7, 8, 9*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-87 are pending in the application.

Priority

No claim for priority has been made. The effective filing date of the application is February 13, 2001.

Information Disclosure Statement

The information disclosure statement (IDS) entered on September 24, 2001 was filed after the mailing date of the application on February 13, 2001. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) entered on June 30, 2002 was filed after the mailing date of the application on February 13, 2001. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) entered on January 14, 2003 was filed after the mailing date of the application on February 13, 2001. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) entered on July 14, 2004 was filed after the mailing date of the application on February 13, 2001. The submission is in

compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

105 Ψ, 203 Ψ, and 205 Ψ.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Figures 1, 2A, 2B, 3A, 3B item 105 Φ.

Figures 2A, 2B, 3A, 3B item 203 Φ.

Figures 2B, 3A item 205 Φ.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 13-15, 20-24, 27-35, 40-42, 47-52, 57, 60-67, 72, 75-81 are rejected under 35 U.S.C. 102(e) as being anticipated by Liao et al (US Patent 6606663), hereinafter referred to as Liao.

In regards to claim 1, Liao discloses a server system for communicating with a client, comprising:

- A first server for communicating with one or more clients, the first server employing a cache memory containing state information for sessions between the first server and the one or more clients (Figure 2 shows the proxy server employing a cache for storing state information for communications with more than one client)
- A second server employing a second cache memory containing the state information (Web servers 205-207 in Figure 2 shows several other servers, each which contain a copy of the cached information for identification purposes as the

proxy will attach credential information to each message and the web server must verify this information, see also col 8 lines 42-49).

In regards to claim 2, Liao discloses the state information is credential information (Figure 2 shows the cache contains credential information).

In regards to claim 3, Liao discloses the credential information includes a Secure Sockets Layer session identifier (the system utilizes HTTPS, which uses an SSL session identifier, col 4 line 64 – col 5 line 4).

In regards to claim 4, Liao discloses the credential information also includes Secure Sockets Layer session information (the system utilizes HTTPS, which includes SSL session information, col 4 line 64 – col 5 line 4).

In regards to claim 5, Liao discloses the credential information also includes authentication information for users of the one or more clients (each request includes authentication information, col 8 lines 24-29).

In regards to claim 6, Liao discloses the credential information also includes authentication information for users of the one or more clients (each request includes authentication information, col 8 lines 24-29).

In regards to claim 7, Liao discloses the state information is data segment information for controlling the transmission of a data segment between the first server device and the one or more client devices (the credential is used to control information transmission, col 8 lines 42-56).

In regards to claim 8, Liao discloses the state information is Transmission Control Protocol/Internet Protocol header information (col 8 lines 29-32 discusses the header information).

In regards to claim 13, Liao discloses the second server can communicate with the one or more clients using the state information (each server in the protected realm can communicate with the client using the cached state information, col 8 lines 58-62).

In regards to claim 14, Liao discloses a third server employing a third cache memory (Figure 2 shows a third server in the protected realm).

In regards to claim 15, Liao discloses the third server can:

- Obtain the state information from the second cache memory employed by the second server (each server in the protected realm has access to the credential information, col 8 lines 58-62).

- Communicate with the one or more clients using the obtained state information (the third server can therefore communicate with the client using the stored credential information, col 8 lines 58-62).

In regards to claim 20, Liao discloses a server system for communicating with clients, comprising:

- A first server for communicating with one or more clients, the first server employing a first cache memory storing a first portion of a cache containing state information for sessions with one or more clients (Figure 2 shows the proxy server employing a cache for storing state information for communications with more than one client)
- A second server employing a second cache memory with a second portion of the cache containing the state information for sessions with one or more clients (Web servers 205-207 in Figure 2 shows several other servers, each which contain a copy of the cached information for identification purposes as the proxy will attach credential information to each message and the web server must verify this information, see also col 8 lines 42-49).

In regards to claim 21, Liao discloses at least some of the state information in the first portion of the cache is for at least one session with at least one of the one or more clients, and at least some of the state information stored in the second portion of the cache is the same as the at least some of the state information stored in the first portion

of the cache, such that both the first server and the second server can communicate with at least one of the one or more clients using at least some of the state information (each server has the same credential information as it is passed to each server by the proxy server, after which the server stores the credential information so the user can communicate with the server, col 8 lines 42-62).

In regards to claim 22, Liao discloses the first portion of the cache stored in the first cache memory is the same as the second portion of the cache stored in the second cache memory, such that both the first server device and the second server device can communicate with any of the one or more clients using the state information (each server has the same credential information as it is passed to each server by the proxy server, after which the server stores the credential information so the user can communicate with the server, col 8 lines 42-62).

In regards to claim 23, Liao discloses including a third server employing a third cache memory storing a third portion of the cache that includes both the first portion of the cache and the second portion of the cache (each server, including the third server, has the same credential information as it is passed to each server by the proxy server, after which the server stores the credential information so the user can communicate with the server, col 8 lines 42-62).

In regards to claim 24, Liao discloses including a fourth server employing a fourth cache

memory storing a fourth portion of the cache that includes the third portion of the cache (Figure 2 shows a fourth server, col 8 lines 42-62 discusses the transfer and storing of credential information).

In regards to claim 27, Liao discloses a method of communicating with a client, comprising:

- Conducting a session with a client from a first server (a client connects to the proxy server, col 8 line 29-32).
- Obtaining state information corresponding to the session between the first server and the client (the credential information is removed from the header, col 8 lines 29-32).
- Caching the state information with at least a second server (the credentials are inserted in a message to a second server and stored, col 8 lines 52-58).
- Resuming the session with the client from the second server using the cached state information (the user can resume communications with any server, col 8 lines 58-62).

In regards to claim 28, Liao discloses:

- Caching the state information with a third server (any number of the servers can store the information for communicating with the client).
- Obtaining the state information for caching with the second server from the third server (the cache information is shared among all the servers).

In regards to claim 29, Liao discloses the state information is credential information (Figure 2 shows the cache contains credential information).

In regards to claim 30, Liao discloses the credential information includes a Secure Sockets Layer session identifier (the system utilizes HTTPS, which uses an SSL session identifier, col 4 line 64 – col 5 line 4).

In regards to claim 31, Liao discloses the credential information also includes Secure Sockets Layer session information (the system utilizes HTTPS, which includes SSL session information, col 4 line 64 – col 5 line 4).

In regards to claim 32, Liao discloses the credential information also includes authentication information for users of the one or more clients (each request includes authentication information, col 8 lines 24-29).

In regards to claim 33, Liao discloses the credential information also includes authentication information for users of the one or more clients (each request includes authentication information, col 8 lines 24-29).

In regards to claim 34, Liao discloses the state information is data segment information for controlling the transmission of a data segment between the first server device and

the one or more client devices (the credential is used to control information transmission, col 8 lines 42-56).

In regards to claim 35, Liao discloses the state information is Transmission Control Protocol/Internet Protocol header information (col 8 lines 29-32 discusses the header information).

In regards to claim 40, Liao discloses including caching the state information at a plurality of servers, such that any of the plurality of servers may resume the session with the client using the state information (any of the servers in the protected realm can communicate with the client, col 8 lines 58-62).

In regards to claim 41, Liao discloses a method of sharing state information among a plurality of server computers, comprising:

- Initiating, from a first server computer, a communication session with a client computer (a client connects to the proxy server, col 8 line 29-32).
- Storing, at the first server computer, state information reflecting the communication session between the first server computer and a client computer (the credential information is removed from the header and cached, col 8 lines 29-32).
- Transmitting the state information from the first server computer to a second server computer, so that the second server computer can enter into a

communication session with the client computer using the state information (the credentials are inserted in a message to a second server and stored, col 8 lines 52-58).

In regards to claim 42, Liao discloses transmitting the state information from the first server computer to a third server computer, so that the third server computer can enter into a communication session with the client computer using the state information (each server, including the third server, has the same credential information as it is passed to each server by the proxy server, after which the server stores the credential information so the user can communicate with the server, col 8 lines 42-62).

In regards to claim 47, Liao discloses the state information is credential information (Figure 2 shows the cache contains credential information).

In regards to claim 48, Liao discloses the credential information includes a Secure Sockets Layer session identifier (the system utilizes HTTPS, which uses an SSL session identifier, col 4 line 64 – col 5 line 4).

In regards to claim 49, Liao discloses the credential information further includes Secure Sockets Layer session information (the system utilizes HTTPS, which includes SSL session information, col 4 line 64 – col 5 line 4).

In regards to claim 50, Liao discloses the state information includes authentication information for a user of the client computer (each request includes authentication information, col 8 lines 24-29).

In regards to claim 51, Liao discloses the state information is data segment information for controlling transmission of a data segment between the first server computer and the client computer (the credential is used to control information transmission, col 8 lines 42-56).

In regards to claim 52, Liao discloses the state information is Transmission Control Protocol/Internet Protocol header information (col 8 lines 29-32 discusses the header information).

In regards to claim 57, Liao discloses including storing the state information at the first server computer in a cache memory (Figure 2 shows the cache at the first server).

In regards to claim 60, Liao discloses a method of sharing state information among a plurality of server computers, comprising:

- Receiving first state information from a first server computer, the first state information reflecting a first communication session between the first server computer and a first client computer (col 8 lines 24-41).
- Storing the first state information (the state information is cached above).

- Receiving second state information from a second server computer, the second state information reflecting a second communication session between the second server computer and a second client computer (Figure 2 shows numerous clients can utilize the system to communicate with numerous servers).
- Storing the second state information (state information is stored in the Credential Cache of Figure 2 for each client).
- Receiving a request for the first state information from a third server computer (when the user connects to the third server, the request is handled by the proxy which includes all credential information with the request, col 8 lines 42-62).
- Transmitting the first state information to the third server computer, such that the third server computer can employ the first state information to reestablish the first communication session with the first client computer (each server, including the third server, has the same credential information as it is passed to each server by the proxy server, after which the server stores the credential information so the user can communicate with the server, col 8 lines 42-62).

In regards to claim 61, Liao discloses:

- Receiving a request for the second state information from a fourth server computer (each computer in the protected realm of Figure 2, which includes servers 2-4, can request the state information).
- Transmitting the second state information to the fourth server computer, such that the fourth server computer can employ the second state information to

reestablish the second communication session with the second client computer (when a client attempts to switch communications to another server, the credential information is forwarded to that server, col 8 lines 42-62).

In regards to claim 62, Liao discloses the first state information is credential information (Figure 2 shows the cache contains credential information).

In regards to claim 63, Liao discloses the credential information includes a Secure Sockets Layer session identifier (the system utilizes HTTPS, which uses an SSL session identifier, col 4 line 64 – col 5 line 4).

In regards to claim 64, Liao discloses the credential information further includes Secure Sockets Layer session information (the system utilizes HTTPS, which includes SSL session information, col 4 line 64 – col 5 line 4).

In regards to claim 65, Liao discloses the credential information includes authentication information for a user of the first client computer (each request includes authentication information, col 8 lines 24-29).

In regards to claim 66, Liao discloses the first state information is data segment information for controlling transmission of a data segment between the first server

computer and the first client computer (the credential is used to control information transmission, col 8 lines 42-56).

In regards to claim 67, Liao discloses the first state information is Transmission Control Protocol/Internet Protocol header information (col 8 lines 29-32 discusses the header information).

In regards to claim 72, Liao discloses including storing the first state information and the second state information in a cache memory (Figure 2 shows the proxy server storing all state information in a credential cache).

In regards to claim 75, Liao discloses a computer network, comprising:

- A plurality of server computers, each server computer employing state information reflecting a communication session with an associated client computer (Figure 2 shows the plurality of servers).
- A cache repository for storing a cache containing the state information for each of the plurality of server computers (Figure 2 shows the credential cache at the proxy server storing the state information).
- A plurality of cache memories, each cache memory being associated with one of the plurality of server computers and storing only a portion of the cache stored in the cache repository (each server in the protected realm can store the credential information for communicating with the client, col 8 lines 58-62).

In regards to claim 76, Liao discloses the state information is credential information (Figure 2 shows the cache contains credential information).

In regards to claim 77, Liao discloses the credential information includes Secure Sockets Layer session identifiers identifying a communication session between at least one of the plurality of servers and a client computer (the system utilizes HTTPS, which uses an SSL session identifier, col 4 line 64 – col 5 line 4).

In regards to claim 78, Liao discloses the credential information further includes Secure Sockets Layer session information (the system utilizes HTTPS, which includes SSL session information, col 4 line 64 – col 5 line 4).

In regards to claim 79, Liao discloses the credential information includes authentication information for a user of the client computer (each request includes authentication information, col 8 lines 24-29).

In regards to claim 80, Liao discloses the state information is data segment information for controlling transmission of a data segment between at least one of the plurality of server computers and a client computer (the credential is used to control information transmission, col 8 lines 42-56).

In regards to claim 81, Liao discloses the state information is Transmission Control Protocol/Internet Protocol header information (col 8 lines 29-32 discusses the header information).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-12, 36-39, 53-56, 68-71, 82-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao in view of Shaw et al. (US Patent Application 2002/2283148).

In regards to claims 9, 36, 53, 68 and 82, Liao fails to disclose the stored state information is purchase information.

Shaw, however, discloses a system of caching personalized content relating to a user, including user behavior and attributes such as billing address in the demographic profile, and interactive commerce which includes items for purchase and financial transaction history (paragraph [0019]). Shaw shows that it is beneficial to store this type or personalized state information as it reduces latency by caching information that will likely be requested in high bandwidth activities.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Liao to include caching personalized content, such as billing addresses, purchase history and financial transactions, as taught by Shaw to reduce latency by caching information that will likely be requested in high bandwidth activities.

In regards to claims 10, 37, 54, 69 and 83, Shaw discloses the purchase information is items selected for purchase. See discussion for claims 9, 36, 53, 68 and 82 for support and motivation.

In regards to claims 11, 38, 55, 70 and 84, Shaw discloses the purchase information is financial transaction information. See discussion for claims 9, 36, 53, 68 and 82 for support and motivation.

In regards to claims 12, 39, 56, 71 and 85, Shaw discloses the purchase information is billing address information. See discussion for claims 9, 36, 53, 68 and 82 for support and motivation.

Claim Rejections - 35 USC § 103

Claims 16, 25, 58, 73 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao in view of The Authoritative Dictionary of IEEE Standard Terms (7^{Th} edition, 2000 by IEEE Inc, pages 505-506), hereinafter referred to as IEEE.

With regards to claims 16, 25, 58, 73, and 86, Liao discloses caching the information but fails to disclose using a hash table for the storing of data. IEEE shows on page 505 –506 that hashing and utilizing a hash table can be used as a means of storing data in a memory structure, or as applied to the above-mentioned claims, a cache. IEEE shows that hashing is a technique for quickly arranging items into a hash table, which is a simple two-dimensional structure that utilizes a quick lookup by way of hash key values.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Liao to include a hash table as taught by IEEE to allow a definitive data structure for the cache that allows quick lookup by virtue of utilizing a key value.

Claims 17, 26, 59, 74 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao in view of IEEE as applied to claims 16, 25, 58, 73 and 86 above, and further in view of Robert Uzgalis (Hashing Concepts and the Java Programming Language, Robert Uzgalis, 1996, pages 1-4).

With regards to claims 17, 26, 59, 74 and 87, Liao in view of IEEE discloses utilizing a hash table to store information in the cache, but fails to disclose using the BUZHash algorithm to store the information. Uzgalis teaches using Library Hash functions in his paper, including the BUZHash algorithm. Uzgalis teaches that the BUZHash algorithm is simply a new algorithm that can compute a large hash value cheaply.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Liao in view of IEEE to utilize the BUZHash algorithm to store the

state information in the cache as the BUZHash algorithm can compute large hash values cheaply.

Claim Rejections - 35 USC § 103

Claims 18-19, 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao in view of Yates et al. (US Patent 6167438), hereinafter referred to as Yates.

In regards to claim 18, Liao discloses the first server transmits information to a second server, however fails to disclose this transmission is using a multicast communication. Yates however discloses a method of distributed caching where one server transmits the cached information to other servers by use of a multicast system (probe messages are multicast to all cache servers in an attempt to located the needed data). Whether the first server receives a negative acknowledgement or positive acknowledgement indicates whether the information is stored at the remote caching computer (col 2 lines 44-47, also col 8 lines 20-54 discusses the resource manager which uses a method of multicasted messages to maintain hit counts as well as constantly updated information about network demographics). Once this information's location is known, the location is cached in the original server to allow a quicker lookup of the information at the next request which increases the overall speed of the network.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Liao to include using a multicast as taught by Yates to update the caches to allow for a quicker response to a request by a client which would increase the overall speed of the system.

In regards to claim 19, Yates discloses the effects of a negative acknowledgement response, see claim 18 discussion.

In regards to claim 43, 44, 45 and 46, Yates discloses a multicast communications method, which is a simultaneous method of communicating, which utilizes both negative and positive acknowledgement messages. See claim 18 discussion for support and motivation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R Brancolini whose telephone number is (703) 305-7107. The examiner can normally be reached on M-Th 7am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRB

FRANTZ B. JEAN
PRIMARY EXAMINER